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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,205	06/23/2006	Minoru Temmyo	29277US3X PCT	9112
22850	7590	01/26/2009	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			COX, ALEXIS K	
		ART UNIT	PAPER NUMBER	
		3744		
		NOTIFICATION DATE	DELIVERY MODE	
		01/26/2009	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/584,205	TEMMYO ET AL.	
	Examiner	Art Unit	
	ALEXIS K. COX	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-12 is/are pending in the application.
 - 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-12 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 23 June 2006 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/22/2006</u> . | 6) <input type="checkbox"/> Other: ____ . |

DETAILED ACTION

Claim Objections

1. Claims 1-12 are objected to because of the following informalities:

Regarding claims 1 and 2, the term "compression, element" on lines 2-3 of claim 1 should be changed to "compression element"; the term "disposed on" on line 4 of claim 1 should be changed to "disposed"; the term "selects" on line 5 of claim 1 should be changed to "which selects"; the term "frequency" on line 7 of claim 1 should be changed to "a frequency"; equivalent terms in claim 2 should be corrected; the term "that" on line 9 of claim 2 should be changed to "feedback rate of temperature information," and the term "its target temperature" in line 8 of claim 1 should be changed to "the target temperature of the freezer."

Regarding claim 3, as it is impossible to not use the information of the temperature of the fresh-food compartment to determine whether the frequency of the compressor should be increased in order to cool the fresh-food compartment, it is suggested a complete revision of the claim to indicate that the frequency of the compressor is only increased when the temperature of the fresh-food compartment is higher than the target temperature of the fresh-food compartment. Additionally, the period following the term "on" in line 3 of claim 3 should be removed, as it is grammatically incorrect. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4, 6, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Kopko (US Patent No. 6,286,326).

Regarding claims 1 and 2, Kopko discloses a refrigerator having an inverter-driven power-variable compressor (28, see column 3 lines 17-23) inherently having a low-pressure compression element and a high-pressure compression element in order to have a variable compression rate, a switching valve (40, see column 3 lines 38-40) disposed downstream of a condenser which receives gas refrigerant discharged from the compressor and selects and controls flow channel and flow rate of refrigerant; and coolers (12, 16, see column 3 lines 5-8) for freezer and fresh-food compartments, each connected with the switching valve through a pressure reducer (32, see column 3 lines 31-33); and wherein frequency of the compressor is decided by a temperature detected in the freezer compartment and fresh food compartment and their target temperatures (44, 46, see column 3 lines 47-49). Additionally, Kopko discloses feedback rate of temperature information from the freezer compartment to be set larger than that from the fresh-food compartment (see column 5 lines 12-14).

Regarding claim 3, Kopko discloses the frequency of the compressor to be increased only when one or more cooling compartment temperatures are above the associated target temperatures (44, 46, see column 3 lines 47-49; see also table in column 3), as changing the compressor frequency from “off” to “low” or “high” constitutes an increase in frequency of compressor.

Regarding claims 4, 6, and 7, when the temperature of the fresh-food compartment is higher than the target temperature of the fresh food compartment, the frequency of a fresh-food cooling fan is increased, as a change from “off” to “on” constitutes an increase in the frequency of the fresh-food cooling fan (see table starting on line 57 of column 3).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 5 and 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kopko (US Patent No. 6,286,326).

Regarding claims 5 and 8-12, when the temperature of the fresh food compartment is higher than the target temperature of the fresh food compartment, the system of Kopko is capable of increasing the frequency of a freezer cooling fan, as can be seen from the combination of the table starting on line 57 of column 3 and lines 19-21 of column 4.

Further regarding claims 1-12, the applicant is reminded that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the structural limitations of the claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yoshioka et al (Application No. 2006/0179858) discloses a

refrigerator with multiple evaporators and associated fans, and a multistage compressor. Haley et al (US Patent Application Publication No. 2002/0157405) discloses a method of optimizing and rating a variable speed chiller. Doi et al (US Patent Application Publication No. 2003/0131618) discloses a two-evaporator refrigerator with associated fans. Lugar (US Patent No. 2,148,868) discloses a control system for a cooling cycle with fans on each of three distinct evaporators. Yamazaki et al (US Patent No. 4,592,206) discloses a heat pump apparatus with switching valve, variable speed compressor, and multiple evaporators and fans, as does Kitamoto (US Patent Numbers 4,876,859 and 5,074,120). Cur et al (US Patent application Publication No. 2008/0156009) discloses a variable capacity modular refrigeration system for kitchens. Buchanan (US Patent No. 2,458,560) discloses a two-temperature refrigeration apparatus with fans on each evaporator. Devery (US Patent No. 3,119,240) discloses a refrigeration apparatus with defrost means and multiple fans. Jaster et al (US Patent No. 5,056,328) discloses a dual evaporator, dual fan refrigerator with independent refrigerator controls. And Seok (US Patent No. 6,119,468) discloses a uniform cooling apparatus for a refrigerator and a control method thereof.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXIS K. COX whose telephone number is (571)270-5530. The examiner can normally be reached on Monday through Thursday 8:00a.m. to 5:30p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler or Frantz Jules can be reached on 571-272-4834 or 571-272-

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6681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/AKC/

/Frantz F. Jules/
Supervisory Patent Examiner, Art Unit 3744